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| APPLICATION NO. FILING DATE |                       | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |      |
|-----------------------------|-----------------------|----------------------|-------------------------|------------------|------|
| 10/618,068                  | 10/618,068 07/14/2003 |                      | Ippei Nakamura          | Q76351           | 4323 |
| 23373                       | 7590                  | 01/27/2006           |                         | EXAM             | INER |
| SUGHRUE                     | -                     |                      | CHOI, LING SIU          |                  |      |
| 2100 PENNS<br>SUITE 800     | SYLVAN                | IA AVENUĖ, N.W.      | ART UNIT                | PAPER NUMBER     |      |
| WASHINGT                    | ron, dc               | 20037                | 1713                    |                  |      |
|                             |                       |                      | DATE MAILED: 01/27/2006 |                  |      |

Please find below and/or attached an Office communication concerning this application or proceeding.

| Aŗ  | oplication No.  | Applicant(s)  |           |  |  |  |  |
|---|---|---|-----------|--|--|--|--|
|   | 0/618,068   | NAKAMURA ET AL  | -•        |  |  |  |  |
| Office Action Summary Ex  | caminer   | Art Unit  |           |  |  |  |  |
|   | ng-Siu Choi   | 1713  |           |  |  |  |  |
| The MAILING DATE of this communication appears Period for Reply   | s on the cover sheet v  | with the correspondence add   | iress     |  |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS WHICHEVER IS LONGER, FROM THE MAILING DATE  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period will ap  - Failure to reply within the set or extended period for reply will, by statute, cause any reply received by the Office later than three months after the mailing date earned patent term adjustment. See 37 CFR 1.704(b). | OF THIS COMMUN. In no event, however, may a ply and will expire SIX (6) MC se the application to become a | IICATION. a reply be timely filed  ONTHS from the mailing date of this cor ABANDONED (35 U.S.C. § 133). |           |  |  |  |  |
| Status  |   |   |           |  |  |  |  |
| 1) Responsive to communication(s) filed on <u>07 Novel</u>  | mber 2005.  |   |           |  |  |  |  |
| 2a) ☐ This action is <b>FINAL</b> . 2b) ☒ This act  | ion is non-final.   |   |           |  |  |  |  |
| 3) Since this application is in condition for allowance   | except for formal ma  | itters, prosecution as to the   | merits is |  |  |  |  |
| closed in accordance with the practice under Ex pa  | arte Quayle, 1935 C.  | D. 11, 453 O.G. 213.  |           |  |  |  |  |
| Disposition of Claims   |   |   |           |  |  |  |  |
| 4)⊠ Claim(s) <u>1-20</u> is/are pending in the application.   |   |   |           |  |  |  |  |
| 4a) Of the above claim(s) 2,3 and 18-20 is/are with   | 4a) Of the above claim(s) 2,3 and 18-20 is/are withdrawn from consideration.                              |   |           |  |  |  |  |
| 5) Claim(s) is/are allowed.   |   |   |           |  |  |  |  |
| 6)⊠ Claim(s) <u>1 and 4-17</u> is/are rejected.   |   |   |           |  |  |  |  |
| 7) Claim(s) is/are objected to.   |   |   |           |  |  |  |  |
| 8) Claim(s) are subject to restriction and/or ele   | ection requirement.   |   |           |  |  |  |  |
| Application Papers  |   |   |           |  |  |  |  |
| 9) The specification is objected to by the Examiner.  |   |   |           |  |  |  |  |
| 10)☐ The drawing(s) filed on is/are: a)☐ accepte  | ed or b) objected to  | by the Examiner.  |           |  |  |  |  |
| Applicant may not request that any objection to the draw  | ving(s) be held in abeya  | ance. See 37 CFR 1.85(a).   |           |  |  |  |  |
| Replacement drawing sheet(s) including the correction i   | •   | • • •   | • •       |  |  |  |  |
| 11) The oath or declaration is objected to by the Exami   | iner. Note the attache  | ed Office Action or form PT   | O-152.    |  |  |  |  |
| Priority under 35 U.S.C. § 119  |   |   |           |  |  |  |  |
| 12)⊠ Acknowledgment is made of a claim for foreign price a)⊠ All b)□ Some * c)□ None of:  | ·   | § 119(a)-(d) or (f).  |           |  |  |  |  |
| 1. Certified copies of the priority documents ha  |   |   |           |  |  |  |  |
| 2. Certified copies of the priority documents ha  |   | <u> </u>  |           |  |  |  |  |
| 3. Copies of the certified copies of the priority of  |   | n received in this National S   | Stage     |  |  |  |  |
| application from the International Bureau (Po   | • • •   |   |           |  |  |  |  |
| * See the attached detailed Office action for a list of the   | ne certified copies no  | ot received.  |           |  |  |  |  |
|   |   |   |           |  |  |  |  |
|   |   |   |           |  |  |  |  |
| Attachment(s)  Notice of References Cited (PTO-892)   | 4) 🗖 Intonioni  | Summary (PTO-413)   |           |  |  |  |  |
| 2) Notice of Praftsperson's Patent Drawing Review (PTO-948)   |   |   |           |  |  |  |  |
| L) INDUCE OF DISTRIBUTION S FATERIC DISWING REVIEW (PTO-948)  | Paper No  | o(s)/Mail Date  |           |  |  |  |  |
| Notice of Draitsperson's Patent Drawing Review (PTO-948)   Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)   Paper No(s)/Mail Date 7/14/03.   | _   | Informal Patent Application (PTO  | -152)     |  |  |  |  |

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#### **DETAILED ACTION**

1. This Office Action is in response to the Response to the Restriction Requirement filed November 7, 2005. Claims 1 and 4-17 of Group I were elected without traverse.

# Claim Objections

2. Claims 7, 9, 11, and 13-15 are objected to because of the following informalities: Claim 7, line 3; claims 9, 11, and 13-15, line 2 "heterocycle" is suggested to be changed to --heterocyclic hydrocarbon--.

Appropriate correction is required.

## Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-9, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kenji et al. (JP 54-092526).

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| cla                      | im   |   | A resin composition comprising                                       |                             |  |  |
|--------------------------|--|---|--|-----------------------------|--|--|
| 3 2                      |  | 1 | Α  | an alkali-soluble resin     |  |  |
|                          |  |   | В  | an infrared absorbing agent |  |  |
| C a thiol co             |  | С | a thiol compound   |                             |  |  |
|                          |  |   | wherein a solubility of the resin composition in an alkaline aqueous |                             |  |  |
|                          |  |   | solution   |                             |  |  |
|                          |  | : | is changed by exposure with an infrared laser beam                   |                             |  |  |
|                          |  |   | wherein the thiol compound can tautomerize as follows.               |                             |  |  |
| -C(SH)=X- ⇔ -C(=S)-X(H)- |  |   |  | -C(SH)=X- ⇔ -C(=S)-X(H)-    |  |  |
|                          | wherein X = nitrogen atom or methine group |   |  |                             |  |  |

Kenji et al. disclose a masking material as ink or coating, comprising a -SH group-containing organic sulfur compound with acid stability and heat resistance, an amine compound, and phenolic and/or rosin type alkali soluble resin, wherein the -SH group-containing organic sulfur compound is listed in Table 1 (page 142). Thus, the present claims are anticipated by the disclosure of Kenji et al.

## Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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6. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenji et al. (JP 54-092526) in view of Miura et al. (JP 11-020318 A).

The disclosure of Kenji et al. is adequately disclosed in paragraph 4 and is incorporated herein by reference.

The difference between the present claims and the disclosure of Kenji et al. is the requirement of the specific -SH group-containing organic sulfur compounds used in the composition.

Miura et al. disclose -SH group-containing sulfur compounds represented as formulae (2), (4), and (8) (page 3). Since formula (8) is also disclosed by Kenji et al., -SH group-containing sulfur compounds represented by formula (2) or (4) is equivalent to and exchangeable with the one represented by formula (8). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use -SH group-containing sulfur compound represented by formulae (2) or (4) in the disclosure of Miura because of its equivalence to and exchange with formula (8) and thereby obtain the present invention.

7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenji et al. (JP 54-092526) in view of Iguchi et al. (US 4,436,805).

The disclosure of Kenji et al. is adequately disclosed in paragraph 4 and is incorporated herein by reference.

The difference between the present claims and the disclosure of Kenji et al. is the requirement of the specific -SH group-containing organic sulfur compounds used in the

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composition.

Iguchi et al. disclose -SH group-containing organic sulfur compound represented

in the general formula (I), which can be a compound of formula (5) or (8) (col. 3, lines 40

and 60). It is noted that -SH group-containing organic sulfur compound can be

represented by the general formula (I). Thus, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to use -SH group-containing

sulfur compound represented by formulae (5) or (8) in the disclosure of Iguchi and

thereby obtain the present invention.

**Conclusion** 

8. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-

1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Wu, can be reach on 571-272-1114.

Licedi

LING-SUI CHOI PRIMARY EXAMINER

January 20, 2005